

PATENT ABSTRACTS OF JAPAN

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(54) AUDIO AND VIDEO APPARATUS

(57)Abstract:

PROBLEM TO BE SOLVED: To improve the use convenience of a car audio system 1 provided with a recording means recording a plurality of methods for selecting the audio signal of a processing object and with a selection means that selects a selection method by allowing the selection means to select a method familiar to use by a user so as to select the audio signal of the processing object.

SOLUTION: The car audio system 1 can select any of signal sources such as an MD section 2, a CD section 3, a TV section 4, an FM/AM section 5 and an external input 6. A memory 10 stores an entire control program of the car audio system 1 and also stores adjustment items and source selection methods or the like set to the car audio system 1. A system control circuit 11 issues a control command according to the control program and the source selection method stored in the memory 10 according to the selection by a user so as to be simply selectable a source desired by the user.

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CLAIMS

[Claim(s)]

[Claim 1] The audio equipment which switches and is characterized with a method by the thing which it had a record means record two or more switch methods which switch the audio signal of said processing object in the audio equipment which chooses and processes the audio signal of a processing object from the audio signal outputted from two or more sources of a signal, and a selection means switch from two or more of said switch methods, and choose a method, and was chosen by said selection means, and which switch the audio signal of said processing object.

[Claim 2] Audio equipment according to claim 1 characterized by having a setting means to receive a setup of said switch method.

[Claim 3] It is audio equipment according to claim 1 characterized by for said record means recording said switch method which corresponds for every user, switching said selection means from said two or more switch methods according to a user, and choosing a method.

[Claim 4] Said selection means is audio equipment according to claim 3 characterized by choosing said switch method based on the discernment result of a user ID means to identify a user.

[Claim 5] The image equipment which switches and is characterized with a method by the thing which it had a record means record two or more switch methods which switch the video signal of said processing object in the image equipment which chooses and processes the video signal of a processing object from the video signal outputted from two or more sources of a signal, and a selection means switch from two or more of said switch methods, and choose a method, and was chosen by said

selection means, and which switch the video signal of said processing object.

[Claim 6] Image equipment according to claim 5 characterized by having a setting means to receive a setup of said switch method.

[Claim 7] It is image equipment according to claim 5 characterized by for said record means recording said switch method which corresponds for every user, switching said selection means from said two or more switch methods according to a user, and choosing a method.

[Claim 8] Said selection means is image equipment according to claim 7 characterized by choosing said switch method based on the discernment result of a user ID means to identify a user.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention is applicable to a car audio system, concerning audio equipment and image equipment. This invention improves a user's user-friendliness by enabling it to choose the switch method of the source.

[0002]

[Description of the Prior Art] There is a device made as [process / the audio signal and video signal which are supplied from the various sources / in audio equipment and image equipment / conventionally / alternatively], and in such a device, it is made as [achieve / by switch of the source / various devices] so that a user can choose rightly the source which is a source of a signal. Especially, in the car audio system, various kinds of switch methods are proposed by restricting the tooth space which can be assigned to a switch of such the source.

[0003] That is, the car audio system is made as [choose / a mini disc a compact disk, FM broadcasting, AM broadcast, etc. / as the source]. If it is in the switch method of the simplest source in this car audio system, as time series shows to drawing 19 - drawing 21 , for example, handler a-f corresponding to such each source is arranged side by side, and the source is switched corresponding to alternative press actuation of these handlers a-f (it is called menu-driven below).

[0004] In this case, in the user, the source for which it asks can be chosen directly and it is made as [improve / by this / user-friendliness]. In addition, in the switch method of the source shown in this drawing 19 - drawing 21 , it is the case where display the source name assigned to each handler a-f by press actuation of the predetermined handler A on (drawing 19) and arranged handler a-f which was located in a line (drawing 20), and the source is further switched following actuation

of handler a-f by the user (drawing 21), and the processing shown in this drawing is the case where a user switches the source to television broadcasting from FM broadcasting.

[0005] On the other hand, if it is in other source switch methods as time series shows, for example to drawing 22 , there are some (it is called a cyclic method below) which switch these sources to a sequential circulation target following press actuation of the handler of one source switch, the number of the handlers arranged to a control panel in this case can be reduced, and the desired source can be chosen simply. In addition, in this drawing 22 , it is the case where the source is switched in the direction shown in an arrow head following press actuation of a predetermined handler one by one.

[0006] On the other hand, if it is in transition in the mode in adjustment/setup of a car audio system, as shown in drawing 23 , it is made as [adjust / tone quality etc. / the adjustment item for which a user asks is chosen from the adjustment item arranged at the layered structure, for example,].

[0007]

[Problem(s) to be Solved by the Invention] By the way, in the switch method of such the source, it changes with models by the manufacturer again. When a car audio system became new, for example with exchange of a car by this, and when a car audio system was exchanged, in a user, actuation of a car audio system had to be mastered anew, and if it was in the car audio system of the part former, there was a user-unfriendly problem.

[0008] Moreover, in an automobile, there was a user-unfriendly problem by operating the car audio system to which are not used for the user who human beings other than owner may use it, and uses an automobile also in this case.

[0009] This invention was made in consideration of the above point, and tends to propose the audio equipment and image equipment which can improve user-friendliness as compared with the former.

[0010]

[Means for Solving the Problem] In invention which relates to claim 1 in order to solve this technical problem, it applies to audio equipment, and has a record means to record two or more switch methods which switch the audio signal of a processing object, and a selection means to switch from the switch method of these plurality and to choose a method, and the audio signal of a processing object is switched with the switch method chosen by this selection means.

[0011] Moreover, in invention concerning claim 5, it applies to image equipment, and has a record means to record two or more switch methods which switch the video signal of a processing object, and a selection means to switch from the switch method of these plurality and to choose a method, and the video signal of a processing object is switched with the switch method chosen by this selection means.

[0012] It switches, and for a user, the switch method to which are used can use by

the method by [which switch the audio signal of a processing object] according to the configuration concerning claim 1, having had a record means record two or more switch methods which switch the audio signal of a processing object, and a selection means switched from the switch method of these plurality and chose a method, and having been chosen by this selection means, choosing. Thereby, the user-friendliness of audio equipments, such as a car audio system, can be improved.

[0013] Moreover, a record means to record two or more switch methods which switch the video signal of a processing object according to the configuration concerning claim 5, With the switch method which was equipped with a selection means to switch from the switch method of these plurality and to choose a method, and was chosen by this selection means By switching the video signal of a processing object, it sets to a video tape recorder, a set top box, etc. In the various image equipments furthermore connected by the home network, it can be used by switching, being able to choose the method and the switch method which is common with further two or more equipments to which it is used for a user. Thereby, the user-friendliness of these image equipments can be improved.

[0014]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained in full detail, referring to a drawing suitably.

[0015] (1) Gestalt drawing 2 of the 1st operation is the block diagram showing the car audio system concerning the gestalt of operation of the 1st of this invention. This car audio system 1 is made as the source which is a source of a signal as [choose / a mini disc, a compact disk, television broadcasting, FM broadcasting, AM broadcast, and an external instrument].

[0016] That is, in an audio system 1, the mini disc (MD) section 2 plays a mini disc following the control command inputted through Bus BUS, and outputs the audio data which it is as a result of [the] playback to Bus BUS. Moreover, the compact disk (CD) section 3 plays a compact disk similarly, and outputs audio data to Bus BUS. The television (TV) section 4 receives a television broadcasting wave following the control command outputted to Bus BUS, and outputs the audio data and the video data which are the receiving result to Bus BUS. The FM/AM section 5 receives FM broadcast wave and AM broadcast wave following the control command outputted to Bus BUS, and outputs the audio data which are the receiving result to Bus BUS. The external input section 6 acquires audio data and a video data from the audio equipment and the visual equipment which were connected to the external instrument input terminal following the control command outputted to Bus BUS, and outputs them to Bus BUS.

[0017] The audio output section 7 acquires the audio data outputted to Bus BUS, carries out analog-to-digital-conversion processing, and drives a loudspeaker 8 by the audio signal obtained as a result. Thereby in the car audio system 1, it is made as [try / it / listening the music of the various sources such as a mini disc,]. At this

time, following the control command outputted to Bus BUS, the audio output section 7 changes sound volume, tone quality, balance, etc., gives special effect further, and drives a loudspeaker 8.

[0018] On the other hand, a display 9 acquires the video data outputted to Bus BUS, and displays it on a liquid crystal display panel. Thereby in this car audio system 1, it is made as [display / it tries listening the program by television broadcasting and / various menu screens].

[0019] Memory 10 memorizes the control program of this car audio system 1 whole, and memorizes an adjustment item, a source switch method, etc. which were further set as this car audio system 1.

[0020] The system control circuit 11 is a microcomputer and controls actuation of this car audio system 1 by publishing control command into Bus BUS following the handlers 15-19 detected through an interface (I/F) 12, and actuation of 20A-20F. The system control circuit 11 publishes control command according to the control program and source switch method which were recorded on memory 10 by a user's selection, and enables it to choose simply the source for which a user asks by this in this control.

[0021] That is, drawing 3 is the top view showing the control panel of this car audio system. The system control circuit 11 controls the whole actuation following the handlers 15-19 arranged at this control panel, and actuation of 20A-20F. The liquid crystal display panel 21 is arranged, and the system control circuit 11 displays the image by television broadcasting on this liquid crystal display panel 21, and various menu screens are displayed on a control panel here. In addition, the system control circuit 11 is made as [notify / display the source, a menu, etc. by which current selection is made on the upper left corner of this liquid crystal display panel 21, and / a user].

[0022] Moreover, the source name which the handler 15 of a source switch in the right-hand side of the liquid crystal display panel 21 and the upper part has been arranged, switched the source to the sequential circulation target following actuation of the handler 15 of this source switch when the switch of the source by the handler 15 of this source switch was chosen by the user in the system control circuit 11, or was assigned to Handlers 20A-20F is displayed on a control panel.

[0023] Moreover, the handler 16 of a menu which opens a menu screen to the right-hand side of the liquid crystal display panel 21 and the handler 15 bottom of a source switch is arranged, and the handler 17 of decision which makes the handler 16 bottom of this menu decide a user's selection in a menu screen is arranged at a control panel.

[0024] The handler 18 of the cursor which furthermore chooses various menus as a control panel in a menu screen at the right-hand side of the liquid crystal display panel 21 and the handler 15 bottom of decision is arranged, and an electric power switch is arranged at the handler 18 bottom of this cursor. Furthermore, the handlers 20A-20F of the source selection which chooses each source directly at the liquid

crystal display panel 21 bottom are located in a line, and are arranged, and when a switch of the source by these handlers 20A-20F is chosen by the user in the system control circuit 11, it is made by the control panel as [switch / following actuation of these handlers 20A-20F / the source].

[0025] Drawing 1 is a mode transition diagram in adjustment/setup of this car audio system 1, and changes in each condition in the car audio system 1 by control of handlers 15-19 and the system control circuit 11 corresponding to actuation of 20A-20F. In addition, if it is in transition in this mode, it is made as [adjust / tone quality etc. / the adjustment item for which a user asks is chosen from the adjustment item arranged at the layered structure, for example,].

[0026] That is, the system control circuit 11 will be switched to the menu screen which shows the display screen of the liquid crystal display panel 21 to drawing 4 , if press actuation of the handler 16 of a menu is carried out where an audition of the desired source is enabled as shown in drawing 3 . In this menu screen, the display of "MENU" which shows that it is a menu screen is arranged here in an upper left corner. Moreover, in the left-hand side of a screen, it is made as [display / the menu on which the item which can be adjusted and set up by selection of this menu screen was summarized for every class of that].

[0027] In addition, these menus are made here as [constitute / by the menu (Audio) on which the adjustment item about an audio signal was summarized, the menu (Visual) on which the adjustment item about the screen of the liquid crystal display panel 21 was summarized, and the menu (System) on which the matter about a setup of a system was summarized]. Moreover, as an adjustment item about an audio signal, bass, loud sound, adjustment of balance, and extent (it is FEDA) of special effect are prepared, and it is made as [establish / brightness, a tint (color), and contrast] as an adjustment item about the screen of the liquid crystal display panel 21. On the other hand, if it is in the matter about a setup of a system, it is made as [assign / the class (beep sound) of actuation sound uttered following actuation etc., time amount doubling (clock) of a clock, selection of a source switch method, and a setup (source switch)].

[0028] In this menu screen, it is displayed by the foreground color in which the menu by which current selection is made differs from other menus, and is made as [display / the selections of the low order hierarchy of the menu in which current selection is further made by the blowdown from a menu]. In addition, in this drawing 4 , the menu (Audio) on which the adjustment item about an audio signal was summarized is chosen now, and the menu of adjustment items, such as bass about this audio signal, loud sound, and balance, will be shown by the blowdown.

[0029] The system control circuit 11 is in a default condition, sets the menu about the audio signal considered that the frequency of selection is the highest among these menus as the menu by which current selection is made, and switches the menu by which current selection is made following press actuation of the vertical direction

of the handler 18 of cursor. Thereby, the system control circuit 11 is made by pressing the handler 18 of cursor twice to the down side as [switch / to the menu (System) on which the matter concerning a setup of a system in the menu chosen now as shown in drawing 5 was summarized].

[0030] Furthermore, the system control circuit 11 will switch actively the menu of the low order hierarchy of the menu by which current selection is made, if the handler 18 of cursor is pressed twice by right-hand side. If shown in the screen which this shows to drawing 6 , it is the case where the handler 18 of cursor is pressed twice by right-hand side from the condition which shows in drawing 5 .

[0031] Furthermore, if the system control circuit 11 is carried out in this way and a low order hierarchy's menu is activated, in this low order hierarchy's menu, it will switch the foreground color of the menu by which current selection is made with other menus, and will display it. The menu of an actuation sound setup will be chosen now in the display screen which this shows to drawing 6 . At this time, the system control circuit 11 is in a default condition, and sets the menu considered that the frequency of selection is the highest among these low order hierarchy's menus as the menu by which current selection is made. In addition, in this way, in a low order hierarchy's menu, the system control circuit 11 will return to a high order hierarchy's menu, if press actuation of the handler 18 of cursor is carried out twice on left-hand side.

[0032] Furthermore, the system control circuit 11 is in the condition which displayed this low order hierarchy's menu, and if press actuation of the handler 18 of cursor is carried out in the vertical direction, it will switch a low order hierarchy's menu by which current selection is made following this press actuation. Thereby, the system control circuit 11 will switch the menu chosen now as shown in drawing 7 to the menu of source ***** which is a source switch setup, if the handler 18 of cursor is pressed twice by the bottom from the condition of having mentioned above about drawing 6 .

[0033] The system control circuit 11 is in the condition that did in this way and a low order hierarchy's menu was chosen, and if press actuation of the handler 17 of decision is carried out, it will display the screen for adjustment which adjusts a still more detailed menu screen or each adjustment item about a low order hierarchy's menu by which current selection is made. When the screen for adjustment is chosen, the system control circuit 11 changes the display of the liquid crystal display panel 21 so that level may be set up following actuation of the handler 18 of cursor and an audio signal may be outputted by balance by the level selected in this way following actuation of the handler 17 of decision etc.

[0034] On the other hand, if the handler 17 of decision is operated where the menu of source ***** is chosen, the system control circuit 11 will display a detailed menu screen on the pan shown in drawing 8 . The display which shows that the menu with which the display of "MENU" which shows that it is a menu screen was arranged and

chosen as the upper left corner in this menu screen here is source ***** is arranged. The menu of the method selection which is the detail menu of source ***** furthermore set as this car audio system 1, and the menu of customize are displayed.

[0035] The menu of method selection here is a menu which chooses a source switch method, and is made with the gestalt of this operation as [choose / as a method of a source switch / it / any of a cyclic method and menu-driven they are]. On the other hand, the menu of customize is a menu which sets a source switch method as the method for which a user asks, and sets up the detail of the cyclic method mentioned above and menu-driven according to liking of a user.

[0036] The system control circuit 11 displays the menu by which current selection is made also in this case by the foreground color of other menus, and different foreground color, is in a default condition and sets the menu of method selection as the menu by which current selection is made. Furthermore, the system control circuit 11 displays the selection menu of the cyclic method corresponding to this menu, and menu-driven by the blowdown by being the menu with which the menu of concrete selection is displayed by the blowdown, and the menu of method selection is chosen in this drawing 8 about the menu chosen now [this] now. Furthermore, the system control circuit 11 switches the menu by which current selection is made following press actuation of the vertical direction of the handler 18 of cursor.

[0037] Drawing 9 is the display screen after the menu of method selection was chosen now, when press actuation of the handler 17 of decision is carried out, and the system control circuit 11 sets up actively the selection menu of the cyclic method which is a low order hierarchy most, and menu-driven in this case, and displays the menu further chosen among the selection menus of these cyclic methods and menu-driven now by the predetermined foreground color. Furthermore, if the menu by which current selection is made following actuation of the vertical direction of the handler 18 of cursor is switched and press actuation of the handler 17 of decision is carried out, as the system control circuit 11 switches the source with the source switch method by the menu by which current selection is made, it will switch a setup.

[0038] That is, when a cyclic method is chosen by actuation of this user, the system control circuit 11 switches the source to a sequential circulation target following press actuation of the handler 15 of a source switch, as mentioned above about drawing 22 . On the other hand, when menu-driven is chosen, following actuation of the handler 15 of a source switch, the source name which it comes to assign to each handlers 20A-20F on Handlers 20A-20F is displayed, and the source is switched according to the handlers 20A-20F in which press actuation was done by the user.

[0039] On the other hand, if it will switch to the menu with which the system control circuit 11 is chosen in the menu of customize now as shown in drawing 11 if the handler 18 of cursor is operated by the bottom in the menu screen of 1 hierarchy high

order and the handler 18 of cursor is operated on right-hand side in this condition as shown in drawing 10 , as shown in drawing 12 , a low order hierarchy's menu will be actively set about the menu of this customize.

[0040] In this customize, the menu of the source name displayed at the time of the source selection by the menu of the sequence of the source switch in a cyclic method and the sequence which customizes a setup of the source assigned to the handlers 20A-20F in menu-driven, and menu-driven, and the source name which customizes the source name displayed where each source is chosen, and the selection menu of other customize are displayed as a low order hierarchy's menu.

[0041] Also in this low order hierarchy's menu, the system control circuit 11 switches the menu by which current selection is made following actuation of the handler 18 of cursor, and displays this menu by which current selection is made by different foreground color from other menus. If press actuation of the handler 17 of decision is furthermore carried out in this condition, a display will be switched to a respectively detailed setting screen.

[0042] When changing a setup of the source assigned to the switch sequence of the source, and Handlers 20A-20F by selection of the menu of sequence here, in this detailed setting screen, by displaying the list of source names and choosing a source name one by one from the lists of this source name, the system control circuit 11 switches the source by this selection sequence, and assigns a source name to Handlers 20A-20F. Thereby, the system control circuit 11 is made as [switch / one by one / in order of a compact disk, a mini disc, television broadcasting, FM broadcasting, AM broadcast, and an external instrument / the source] in what had switched the source one by one with the cyclic method till then in order of FM broadcasting, AM broadcast, a compact disk, a mini disc, television broadcasting, and an external instrument, as shown in drawing 13 .

[0043] Moreover, if it is in menu-driven, as customize order is shown in drawing 14 (A) and (B), it is made as [assign / Handlers 20A-20F / the desired source] .

[0044] On the other hand, when changing a source name by selection of the menu of a source name, the menu screen for a name input is displayed on the display screen, modification of a source name is received by actuation of the handler 18 of the cursor in this menu screen, and actuation of the handler 17 of decision, and a source name is displayed with this changed source name.

[0045] (1-2) In the configuration beyond actuation of the gestalt of the 1st operation, in this car audio system 1, if a user does press actuation of the handler 16 of a menu, a display will switch to a menu screen (drawing 3), and switch to the selection screen of (drawing 4 - drawing 8), and a source switch method by following a hierarchy one by one in this menu screen, and choosing the menu of method selection (drawing 9). In the user who is experienced in actuation of this kind of system with the cyclic method here, and the user who is experienced in actuation of this kind of system by menu-driven contrary to this, by choosing a cyclic method and menu-

driven, respectively and operating the handler 17 of decision, it is set up so that a cyclic method can be switched and the source can be switched by menu-driven, respectively.

[0046] That is, if it is in a cyclic method, the source can switch to a sequential circulation target by press actuation of the handler 15 of a source switch (drawing 22), press actuation of a handler 15 can be repeated in the user who chose this source switch method by this, and the desired source can be chosen with the source switch method by the cyclic method to which it is used till then, or the source switch method by the favorite cyclic method.

[0047] On the other hand, if it is in menu-driven, the name of the source assigned to each handlers 20A-20F is displayed on HandlersA [20]-20F bottom by actuation of the handler 15 of a source switch (drawing 20 and drawing 21), and it switches to the source for which it asks by press actuation which is the handlers 20A-20F to which the desired source name was assigned. Thereby in a user, the desired source can be chosen with the source switch method by the menu-driven to which it is used till then, or the source switch method by favorite menu-driven.

[0048] By these, in the car audio system 1, a source switch method can be chosen by a user's selection, and the part user-friendliness can be improved.

[0049] On the other hand, it switches to (drawing 4 - drawing 8), and the screen of customize by following a hierarchy one by one in a menu screen, and choosing the menu of customize (drawing 11 and drawing 12). The desired source can be assigned to each handlers 20A-20F, when the sequence for which a user asks when based on a cyclic method will twist to menu-driven again if a source name is specified one by one after choosing the menu of sequence here.

[0050] Thereby, in the car audio system 1, the desired source can be chosen by actuation to which it is used if needed, and user-friendliness can be improved much more to the part pan.

[0051] On the other hand, in the screen of customize, it becomes possible by choosing the menu of a source name to change the source name assigned to each handlers 20A-20F by menu-driven, and the source name displayed on the liquid crystal display panel 21 where each source is chosen.

[0052] Also by this, in the car audio system 1, the desired source can be chosen by actuation to which it is used further much more, and user-friendliness can be improved.

[0053] (1-3) According to the configuration beyond the effectiveness of the gestalt of the 1st operation, by preparing two or more switch methods of the source selectable, the switch method of the source to which are used, and the switch method of the favorite source can be chosen, and, thereby, user-friendliness can be improved.

[0054] Moreover, by the ability setting up the source assigned to the switch sequence of the source, and Handlers 20A-20F, by the ability changing a source name further, the switch method of the source to which it is used with this, and the switch method

of the favorite source can be chosen, and, thereby, user-friendliness can be improved.

[0055] (2) In the car audio system concerning the gestalt of operation of ***** of the 2nd operation, as shown in drawing 15 , register the switch method of the source for every user who uses a car audio system by selection of the switch menu of the source, and switch the source with this registered method.

[0056] For this reason, in the car audio system concerning the gestalt of this operation, a system control circuit provides a user with the menu which registers the switch method of the source into the low order hierarchy of a menu who summarized the matter about a setup of a system, and this registered menu of the call which switches and calls a method, as shown in drawing 15 .

[0057] That is, a system control circuit will display the menu screen which replaces with the detailed menu screen mentioned above about drawing 8 , and is shown in drawing 16 , if the menu of source ***** which is a source switch setup is chosen. In this display screen, the menu of method selection, the menu of customize, the menu of registration, and the menu of a call are arranged, and the menu of the low order hierarchy of the menu by which current selection is made, respectively is displayed by the blowdown here.

[0058] In this condition, a system control circuit switches the menu by which current selection is made following actuation of the vertical direction of the handler 18 of cursor, and displays this menu by which current selection is made by different foreground color from other menus. If the menu of registration is chosen and the handler 17 of decision is operated as furthermore shown in drawing 17 , a display will be switched to the detail screen of registration, registration of user ID and a corresponding source switch method will be received, and this data will be recorded on memory 10. In addition, a system control circuit receives registration of the source switch method by the menu-driven of the customized source switch method, a standard cyclic method, and a criterion in registration of the source switch method for every user of this.

[0059] On the other hand, if the menu of a call is chosen and the handler 17 of decision is operated as shown in drawing 18 , a system control circuit will display the user ID which carried out in this way and was registered, and will set the source switch method which corresponds by selection of this user ID.

[0060] Even when two or more users use a car audio system by the ability offering the source switch method and each user's favorite source switch method to which it is used for every user by prior registration according to the gestalt of this 2nd operation, the same effectiveness as the gestalt of the 1st operation can be acquired.

[0061] (3) Switch the source in the gestalt of operation of ***** of the 3rd operation with the source switch method registered about each user by linkage with the user recognizing ability with which the automobile was equipped. That is, if it is in a passenger car, there are a setup of sheets, such as height and an inclination, and a thing made as [register / a door mirror etc. / for every user / further]. If it is in

such a passenger car, a sheet etc. is set as the conditions which this user registered in advance by actuation of a user in a driver's seat.

[0062] The source switch method registered in advance in this car audio system according to the identification information used for a setup of this sheet etc. by this is set.

[0063] According to the gestalt of this 3rd operation, even if it does not call the source switch method registered one by one, when two or more users use a car audio system, user-friendliness can be improved further much more by the ability offering the source switch method and each user's favorite source switch method to which it is used for every user.

[0064] (4) Although the case where only a source switch method was made selectable was described, you may make it this invention set up the conditions of sound field etc. collectively in addition to this in the gestalt of other operations, in addition the gestalt of above-mentioned operation.

[0065] Furthermore, although the case where this invention was applied to a car audio system in the gestalt of above-mentioned operation was described, this invention is applicable not only to this but various audio equipment and the image equipment which processes [playback / record] alternatively the video signal further outputted from the various sources of a signal. In addition, although the case where a source switch method was set up by a user's taste in the gestalt of above-mentioned operation in these cases was described, you may make it choose a source switch method by thinking, also when building a home network depending on the equipment to apply, for example, so that other devices of the same kind and source switch methods may be unified in this case.

[0066]

[Effect of the Invention] According to this invention, a user's user-friendliness can be improved by enabling it to choose the switch method of the source as mentioned above.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the state transition diagram of the car audio system concerning the gestalt of operation of the 1st of this invention.

[Drawing 2] It is the block diagram showing the car audio structure of a system of drawing 1 .

[Drawing 3] It is the top view showing the control panel of the car audio system of drawing 1 .

[Drawing 4] It is the top view showing the menu screen of the car audio system of drawing 1 .

[Drawing 5] It is the top view showing the condition of having chosen the menu of system construction.

[Drawing 6] In the menu of system construction, it is the top view showing the condition of having chosen the setting menu of an actuation sound.

[Drawing 7] In the menu of system construction, it is the top view showing the condition of having chosen the menu of source *****.

[Drawing 8] It is the top view showing the menu screen of source *****.

[Drawing 9] It is the top view showing the condition of having chosen the menu of method selection in the menu screen of source *****.

[Drawing 10] It is the top view showing the menu screen of source *****.

[Drawing 11] It is the top view showing the condition of having chosen the menu of customize in the menu screen of source *****.

[Drawing 12] In the menu screen of customize of drawing 10 , it is the top view showing the condition of having chosen the menu of sequence.

[Drawing 13] It is the approximate line Fig. with which explanation of a switch of the sequence by the cyclic method is presented.

[Drawing 14] It is the approximate line Fig. with which explanation of a switch of the sequence by menu-driven is presented.

[Drawing 15] It is the state transition diagram of the car audio system concerning the gestalt of operation of the 2nd of this invention.

[Drawing 16] It is the top view showing the menu screen of source ***** in the car audio system of drawing 15 .

[Drawing 17] In the car audio system of drawing 15 , it is the top view showing the condition of having chosen the menu of registration.

[Drawing 18] In the car audio system of drawing 15 , it is the top view showing the condition of having chosen the menu of a call.

[Drawing 19] It is the top view showing the control panel of the conventional car audio system.

[Drawing 20] It is the top view showing the display screen of the menu-driven in the car audio system of drawing 19 .

[Drawing 21] It is the top view with which explanation of a switch of the source by the menu-driven of drawing 20 is presented.

[Drawing 22] It is the approximate line Fig. with which explanation of a switch of the source by the cyclic method is presented.

[Drawing 23] It is the state transition diagram of the conventional car audio system.

[Description of Notations]

1 A car audio system, 22 .. A system control circuit, 21 .. Liquid crystal display panel